

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-2, 4-8, 10-14, 16-29 and 31-32 are presently active in this case. The present Amendment amends Claims 13, 22-29 and 31-32 without introducing any new matter and cancels Claims 30 and 33.

Claims 22-23 and 25-26 were rejected under 35 U.S.C. §103(a) as unpatentable over Hoffman et al. (U.S. Patent No. 6,771,916, herein "Hoffman") in view of Okado et al. (U.S. Patent No. 6,137,977, herein "Okado") and Kato et al. (U.S. Patent No. 5,038,174, herein "Kato"). Claims 24 and 27 were rejected under 35 U.S.C. §103(a) as unpatentable over Moriki et al. (U.S. Patent No. 6,077,636, herein "Moriki") in view of Hoffman, Okado and Kato.

Claims 1, 2, 4-8, 10-14 and 16-21 were allowed and Claims 28-33 were indicated as allowable if rewritten in independent form. Applicants acknowledge with appreciation the indication of allowable subject matter.

In response, Claims 24 and 27 are amended to recite all the features of dependent Claims 30 and 33, respectively. Consequently, Claims 30 and 33 are cancelled. However, since Applicants consider that Claims 22-23 and 25-26, from which Claims 28-29 and 31-32 depend, define patentable subject matter, Claims 22-23 and 25-26 are maintained in independent form at the present time.

To correct minor informalities, Claims 13, 22-29 and 31-32 are amended. Since the changes are only formal in nature, they are not believed to raise a question of new matter or narrow those claims in any aspect.

In response to the rejection of Claims 22-23 and 25-26 under 35 U.S.C. §103(a), Applicants respectfully request reconsideration of this rejection and traverse the rejection, as discussed next.

Briefly recapitulating, Claim 22 relates to an electrophotographic image forming apparatus, including *inter alia*: a photoconductive element; means for uniformly charging the surface of said photoconductive element; a developing unit; means for dehumidifying air; wherein an image forming module is removably mounted to a casing of an apparatus body; the image forming module includes the photoconductive element, the means for uniformly charging the surface, and the developing unit; and the means for dehumidifying air sends dehumidified air into the image forming module. Independent Claims 23 and 25-26 recite similar features.

Applicants respectfully traverse the obviousness-type rejection based on Hoffman and Kato because there is insufficient evidence for a motivation to modify Hoffman's air quality management apparatus with first and second interior volumes for an electrostatic printer by incorporating Kato's removably mounted image forming module, for the following reasons.¹

The outstanding Office Action states that the proposed modification would have been obvious "to have the modules be removably mounted, as disclosed in Kato et al. (...174) since it is well known in the art to have image forming modules that have walls with gaps for airflow be removably mounted, as disclosed by Kato (...174) so that the modules can be replaced."² The record, however, fails to provide the required *evidence* of a motivation for a person of ordinary skill in the art to perform such modification. While Kato may provide a

¹ See MPEP 2143.01 stating "[o]bviousness can only be established by combining or modifying the teaching of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art," (citations omitted). See also MPEP 2144.08 III stating that "[e]xplicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. 103 ground of rejection. . . . Conclusory statements of similarity or motivation, without any articulated rational or evidentiary support, do not constitute sufficient factual findings."

² See the outstanding Office Action at page 4, lines 14-17.

reason for using a detachably mounted image forming unit in an image forming apparatus to evacuate ozone,³ Kato fails to suggest why a person of ordinary skill in the art would be motivated to incorporate such a feature in an electrostatographic printer with air flow management, wherein a first volume is ventilated without air-conditioning, and a second volume is ventilated with air-conditioning,⁴ such as the one disclosed by Hoffman. In particular, Hoffman uses different modules so that the air-flows do not mix together.⁵ Kato, however, does not suggest that detachably mounted image forming units with air flowing through the exposure opening would work in an air-quality management apparatus with different air chambers. Kato does not state that an image forming apparatus with detachably mounted image forming units needs “image forming modules what have walls with gaps for airflow.”⁶

In addition, Hoffman is not concerned with evacuating ozone through exposure openings. Instead, Hoffman is concerned with air-conditioned and non-air-conditioned chambers to control temperature and relative humidity in different chambers of the image forming module. Hoffman states that its structure already achieves the goal of air quality management for temperature and humidity in a modular electrostatographic printer.⁷ Hoffman does not suggest that further improvement is desired, nor that another feature should be added to further improve the air quality management. In particular, Hoffman does not suggest adding a detachably mounted image forming module, such as those disclosed in Kato.

Hoffman and Kato, therefore, do not provide a motivation to perform the proposed modification of Hoffman. In other words, an attempt to bring in the isolated teaching of Kato’s detachably mounted image forming module into Hoffman’s modular printer with

³ See Kato in the Abstract and at column 2, lines 65-68.

⁴ See Hoffman in the Abstract.

⁵ See Hoffman in the Abstract and at column 9, lines 3-11 and in corresponding Figure 2.

⁶ See the outstanding Office Action at page 4, line 16.

⁷ See Hoffman, for example, at column 8, lines 51-63.

main- and auxiliary chambers with different airflows would amount to improperly picking and choosing features from different references without regard to the teachings of the references as a whole.⁸ While the required evidence of motivation to combine need not come from the applied references themselves, the evidence must come from *somewhere* within the record.⁹ In this case, the record fails to support the proposed modification of the Hoffman.

Furthermore, it is not clear from the record how the teachings of Kato's detachably mounted image forming unit with airflow through the exposure opening could be incorporated with the teachings in Hoffman. Hoffman's image forming modules M1 to M5 are separated by walls or even only by partial walls, and further, Hoffman's air quality management apparatus includes auxiliary chambers A1-A5, with seals maintaining effective isolation of the auxiliary modules from the modules M1-M5.¹⁰ Under such a modification, one single detachably mounted image forming unit would have to replace the entire air quality management system with different modules separated into a first volume and second volume. Such modification would require a substantial reconstruction or redesign of the elements of Hoffman's air quality management apparatus, and/or would change the basic principle of operation of Hoffman. There is no evidence that a person of ordinary skill in the art would be motivated to perform such changes and redesign.¹¹

⁸ See In re Ehrreich 590 F.2d 902, 200 USPQ 504 (CCPA, 1979) (stating that patentability must be addressed "in terms of what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, not in view of first one and then another of the isolated teachings in the art," and that one "must consider the entirety of the disclosure made by the references, and avoid combining them indiscriminately.")

⁹ See In re Lee, 277 F.3d 1338, 1343-4, 61 USPQ2d 1430 (Fed. Cir. 2002) ("The factual inquiry whether to combine references ... must be based on objective evidence of record. ... [The] factual question of motivation ... cannot be resolved on subjective belief and unknown authority. ... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion").

¹⁰ See Hoffman from column 15, line 66 to column 16, line 33 and in corresponding Figure 2.

¹¹ See In re Ratti, 270 F.2d 810, 813, 123 USPQ 349, 352 (reversing an obviousness rejection where the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.")

In rejecting a claim under 35 U.S.C. §103(a), the U.S.P.T.O. must support its rejection by "substantial evidence" within the record,¹² and by "clear and particular" evidence¹³ of a suggestion, teaching, or motivation to combine the teachings of different references. As discussed above, there is no substantial evidence, nor clear and particular evidence, within the record of motivation for modifying Hoffman by incorporating Kato's detachably mounted image forming module. Without such motivation and absent improper hindsight reconstruction,¹⁴ a person of ordinary skill in the art would not be motivated to perform the proposed modification, and Claims 22-23 and 25-26 are believed to be non-obvious and patentable over the applied references.

Consequently, in view of the present Amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-2, 4-8, 10-14, 16-29 and 31-32 is earnestly solicited.

¹² See In re Gartside, 203 F3d 1305, 53 USPQ2d 1769 (Fed. Cir. 2000) (holding that, consistent with the Administrative Procedure Act at 5 USC 706(e), the CAFC reviews the Board's decisions based on factfindings, such as 35 U.S.C. § 103(a) rejections, using the 'substantial evidence' standard because these decisions are confined to the factual record compiled by the Board.)

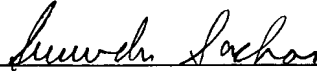
¹³ See In re Dembiczak, 175 F3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, although 'the suggestion more often comes from the teachings of the pertinent references.' The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular." (emphasis added).

¹⁴ See MPEP 2141, stating, as one of the tenets of patent law applying to 35 USC 103, that "[t]he references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention."

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

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